

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Shigeki MIYASHITA

Attn: PCT Branch

Application No. New U.S. National Stage of PCT/IB2004/003353

Filed: March 27, 2006

Docket No.: 127434

For: EXHAUST GAS CONTROL APPARATUS FOR INTERNAL COMBUSTION
ENGINE

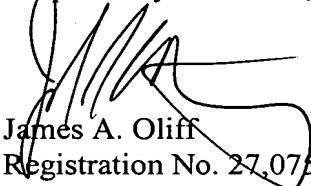
**TRANSLATION OF THE ANNEXES TO THE
INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Attached hereto is a translation of the annexes to the International Preliminary Report on Patentability (Form PCT/IPEA/409). The attached translated material replaces the material in the claims.

Respectfully submitted,


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Enclosure of May 3, 2005

Our ref.: WO 42387

PCT-Application No.: PCT/IB04/003353

Applicant: TOYOTA JIDOSHA KABUSHIKI KAISHA

Amended claims 1 to 5

1. An exhaust gas control apparatus for an internal combustion engine, provided with a NOx storage/reduction catalyst (7) provided in an exhaust passage and which stores NOx in exhaust gas by at least one of adsorption and absorption when an air-fuel ratio of in-flowing exhaust gas is lean, and then reduces and purifies the stored NOx using reduction components in the exhaust gas when the air-fuel ratio of the in-flowing exhaust gas is rich, the apparatus comprising:

an upstream side portion (7a) of a carrier of the NOx storage/reduction catalyst (7), which is positioned on an upstream side of an exhaust gas flow, and a downstream side portion (7b) of the carrier (7a, 7b) of the NOx storage/reduction catalyst (7), which is positioned on the downstream side of the exhaust gas flow, wherein the carrier (7a, 7b) carries an oxygen storage component that absorbs oxygen in the exhaust gas when the air-fuel ratio of the exhaust gas is lean and releases the absorbed oxygen when the air-fuel ratio of the exhaust gas is rich, and the amount of the oxygen storage component on the upstream side portion (7a) of the carrier (7a, 7b) is made less than the amount of the oxygen storage component on the downstream side portion (7b) of the carrier (7a, 7b);

characterized in that

a NOx storage capacity of the upstream side portion (7a) of the carrier (7a, 7b) is made greater than the NOx storage capacity of the downstream side portion (7b) of the carrier (7a, 7b).

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2. The exhaust gas control apparatus according to claim 1, characterized in that the upstream side portion (7a) of the carrier (7a, 7b) and the downstream side portion (7b) of the carrier (7a, 7b) carry at least one of platinum, palladium and rhodium, and the NOx storage capacity of the upstream side portion (7a) of the carrier (7a, 7b) is made greater than the NOx storage capacity of the downstream side portion (7b) of the carrier (7a, 7b) by changing an amount of at least one of platinum, palladium and rhodium carried on the upstream side portion (7a) of the carrier (7a, 7b) and the downstream side portion (7b) of the carrier (7a, 7b).

3. The exhaust gas control apparatus according to claim 1 or 2, characterized in that the NOx storage capacity of the upstream side portion (7a) of the carrier (7a, 7b) is made greater than the NOx storage capacity of the downstream side portion (7b) of the carrier (7a, 7b) by changing at least one of a carrier cell shape, a carrier cell size, and a carrier cell number on the upstream side portion (7a) of the carrier (7a, 7b) and the downstream side portion (7b) of the carrier (7a, 7b).

4. The exhaust gas control apparatus according to one of the claims 1 to 3, characterized in that the upstream side portion (7a) of the carrier (7a, 7b) and the downstream side portion (7b) of the carrier (7a, 7b) are provided separately.

5. The exhaust gas control apparatus according to one of the claims 1 to 3, characterized in that the upstream side portion (7a) of the carrier (7a, 7b) and the downstream side portion (7b) of the carrier (7a, 7b) are provided integrally.